

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (canceled).
2. (canceled).
3. (canceled).
4. (canceled).
5. (canceled).
6. (canceled).
7. (canceled).
8. (canceled).
9. (canceled).
10. (canceled).
11. (canceled).
12. (canceled).
13. (canceled).
14. (canceled).
15. (currently amended): A connector system for establishing ~~electric~~ electricity and air connection between at least two wires that allow conduction of ~~electric~~ electricity and air, termed herein as “air conductive wires”, the system comprising:
 - first and second air conductive wires having first and second terminals connected to the first and second air conductive wires, respectively;
 - a connector assembly for establishing ~~electric~~ electricity and air connection between said air conductive wires;
 - said connector assembly ~~being configured so as to establish~~ including sealing means for establishing an air conduction path hermetically sealed from the exterior; and

wherein said first air conductive wire is adapted for air-conductivity connecting to a sensor and said second air conductive wire is adapted for connecting to an engine control unit under electric and air connection.

16. (currently amended): The connector system as defined in claim 15, wherein ~~said system further comprises;~~

said sealing means comprises means for hermetically sealing a spacing between said air conductive wires formed within said connector assembly, so as to receive said terminals within said sealed spacing;

~~said electric connection between said terminals being direct or indirect~~ electrically connected either directly or indirectly; and

said air connection being established via said sealed spacing serving as air conduction path within said connector assembly.

17. (canceled).

18. (currently amended): The connector system as defined in claim 15, wherein said connector assembly is connected under ~~electric~~ electricity and air connection to a control unit for ~~said a~~ sensor.

19. (original): The connector system as defined in claim 15, wherein the system further comprises at least one electric wire other than said first and second air conductive wires, said at least one electric wire and said air conductive wires together making up a harness.

20. (currently amended): A connector and sensor assembly comprising:
said connector system as defined in claim 15, and
a sensor connected to the first air conductive wire,
wherein said connector is further connected with a sensor control unit under ~~electric~~ electricity and air connection.

21. (original): The connector and sensor assembly as defined in claim 20, wherein said sensor is disposed in a first atmosphere, and

said air conduction path is in communication with a second atmosphere different from the first atmosphere.

22. (original): The connector and sensor assembly as defined in claim 20, wherein said first atmosphere is the exterior atmosphere of a motor vehicle, and said second atmosphere is an atmosphere with a higher compatibility to the sensor than the exterior atmosphere.

23. (original): The connector and sensor assembly as defined in claim 22, wherein said second atmosphere is secured from intrusion of water from the first atmosphere.

24. (original): The connector and sensor assembly as defined in claim 20, wherein said sensor comprises a gas sensor for measuring gas components including O₂, NO_x, H₂O, CO₂, CO and HC.

25. (currently amended): The connector and sensor assembly as defined in claim 20, further including a sensor controller which is connected to and through said connector under ~~electric~~ electricity and air conduction with said sensor.

26. (canceled).

27. (canceled).

28. (canceled).

29. (new): A connector system having;
a connector forming a part of a sensor controller;
an air conductive sensor side heater wire;
a sensor side terminal connected to said sensor side heater wire and inserted into said connector;
an air conductive ECU side heater wire;
an ECU side terminal connected to said ECU side heater wire and inserted into said connector;
a sealing unit for hermetically sealing a spacing defined between said sensor side heater wire and said connector;
and a sealing unit for hermetically sealing a spacing defined between said ECU side heater wire and said connector,
in a state said sensor side terminal and the ECU side terminal have been inserted into said connector, to form a closed space as an air conduction path;
said sensor side terminal and the ECU side terminal being electrically connected;

whereby an air conduction part of said sensor side heater wire is in communication through said air conduction path with an air conducting part of said ECU side heater wire.